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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/796,126	03/10/2004	Christian Cotteville	Q80242	2476

7590 05/16/2006

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EXAMINER
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TRAN, HOANG Q

ART UNIT	PAPER NUMBER
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2874

DATE MAILED: 05/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/796,126

Applicant(s)

COTTEVILLE ET AL.

Examiner

Hoang Tran

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 and 11-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-6 and 11-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1, 3, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by the US Patent to Casiraghi (6,278,251).**

In terms of Claim 1, Casiraghi teaches an optical fiber cable (Figure 1), at least one central strength member (Column 3 lines 25-30), at least one optical fiber (Column 3 lines 24), a metallic conductor surrounding said fiber (Column 3 lines 40-45), surrounding said conductor (Column 3 lines 40-45), a layer of insulative composition comprising mainly a mixture of polymers comprising at least one high density first polymer and low density second polymer which has a lower viscosity than said first polymer (Column 4 line 25-45).

As for Claim 3, Casiraghi teaches a cable according to Claim 1, wherein said first polymer is a high-density polyethylene and said second polymer is a low-density polyethylene (Column 4 lines 20-25 and Table 1).

As for Claim 6, Casiraghi teaches a cable according to Claim 1, wherein said insulative composition further contains additives (Column 5 lines 30-35).

### ***Claim Rejections - 35 USC § 103***

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 2, 4, 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Casiraghi in view of the WIPO Patent Application Publication to Rogestedt (WO9703124A1).**

With respect to Claim 2, Casiraghi teaches the cable according to Claim 1. Casiraghi does not teach an optical cable wherein said first polymer has a melt flow rate less than 6g/10 min. Rogestedt teaches a cable wherein the first polymer has a melt flow rate less than 6g/10 min (Page 8 line1) to find the optimal density configuration of the polymer mixture. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teaching of Rogestedt's first polymer melt flow rate attribute to Casiraghi optical cable in order to manipulate different density of the polymer mixture to obtain better process ability.

With respect to Claim 4, Casiraghi teaches the cable according to Claim 1. Casiraghi does not teach an optical cable wherein the proportion of said second polymer is at most 20% by weight of said polymer mixture. Rogestedt teaches a cable wherein the proportion of said the polymers is at most 20% by weight of said polymer mixture (Page 4 line 10-15) to produce a cable with improved properties. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the

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teaching of Rogestedt's polymer weight limitations of 20% to Casiraghi optical cable in order to produce a product with better properties such as ESCR, shrinkage, and mechanical strength.

With respect to Claim 5, Casiraghi teaches the cable according to Claim 1. Casiraghi does not teach an optical cable wherein the proportion of said second polymer is from 5%-20% by weight of said polymer mixture. Rogestedt teaches a cable the proportion of said the polymers is at most 20% by weight of said polymer mixture (Page 4 line 10-15) preferably 1-10% to produce a cable with improved properties. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teaching of Rogestedt's polymer weight limitations of 5%-20% of the polymer weight mixture to Casiraghi optical cable in order to produce a product with better properties such as ESCR, shrinkage, and mechanical strength.

**Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over the US Patent to Casiraghi in view of the US Patent Application Publication to Tuminaro (2002/0090183).**

Regarding Claim 11, Casiraghi teaches the cable of Claim 1. Casiraghi does not teach the cable of Claim 1 further comprising an armor layer disposed on the outside of said insulate layer. Tuminaro does teach an application of a fiber cable further comprising of an armor layer disposed on the outside of said insulate layer (Paragraph [0036]) in order to enhance the mechanical protection of the cable. A motivation for such an application would be to increase the durability of the cable by enhancing the protective layer of the cable. Therefore it would have been obvious to one of ordinary

skill in the art at the time of the invention to apply the teachings of Tuminaro to the cable of Casiraghi in order to enhance the protective layer of the cable.

**Claim 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the US Patent to Casiraghi in view of the US Patent to Petisce (5,539,849).**

Regarding Claim 12, Casiraghi teaches the cable of Claim 1. Casiraghi does not teach the cable of Claim 1, wherein said metallic conductor is immediately adjacent said optical fiber and said insulative layer is immediately adjacent said metallic conductor. Petisce does teach a fiber cable comprising of the configuration stated above (Fig 1) in order to make the cable ideal for under sea deployment. A motivation for such a configuration would be to make the cable idea for deployment in sea or ocean like conditions. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of Petisce to the cable of Casiraghi in order to make a cable capable of under sea deployment.

As for Claim 13, Casiraghi teaches an annular metallic conductor (Fig 1).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoang Tran whose telephone number is 571-272-5049. The examiner can normally be reached on 9:00AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on 571-272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

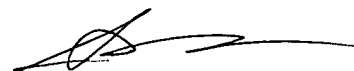
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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ht



Hoang Tran  
AU 2874  
May 15, 2006



SUNG PAK  
PRIMARY EXAMINER